



Guide to ATTRA's Livestock and Pasture Publications

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Contents

Livestock industry reports.....	1
Cattle production (beef and dairy)	2
Hog production.....	3
Sheep and goat production.....	4
Poultry production.....	5
Organic livestock production.....	7
Animal health and nutrition.....	8
Pasture, forage, grazing and range management	9
Aquaculture and aquaponics.....	11
Wildlife and unconventional livestock farming.....	11
Other livestock topics.....	11
Publicaciones en Español/Spanish publications	12
Publications in Hmong.....	12

The resources offered here deal with sustainable livestock production from the ground up. Several publications cover pasture management, feeds and forages, while others address care and management for specific animals and marketing of the products derived from them. If you are an experienced or beginning producer, you can find useful information relating to traditional livestock such as beef and dairy cattle, sheep, hogs and poultry, as well as introductions to alternative livestock options from bees to bison.



Photos by Linda Coffey, NCAT.

Livestock industry reports

Building a Montana Livestock Industry – IP346 (print only)

Montana Organic Producers Cooperative Final Report Growth Through Ag Project

The report begins with the cost of production survey and then summarizes a report on how Montana Organic Producers Cooperative members can better access regional and national markets. In a broader sense, this report provides an understanding of the value chain of the

organic grass-finished beef market from producer to consumer.

Natural Livestock Feasibility Study – IP347 (print only)

Final Report

This report outlines the results of efforts by the National Center for Appropriate Technology (NCAT) to educate and gather information from potential partners to decide the feasibility of developing an alternative livestock (mostly beef) industry in Inyo and Mono counties in California.

ATTRA—National Sustainable Agriculture Information Service (www.ncat.attra.org) is managed by the National Center for Appropriate Technology (NCAT) and is funded under a grant from the United States Department of Agriculture's Rural Business-Cooperative Service. Visit the NCAT Web site (www.ncat.org/sarc_current.php) for more information on our sustainable agriculture projects.



To view and download the publications in this guide (except those labeled print only), visit the Livestock section of the ATTRA Web site at www.attra.ncat.org/livestock.html. For a free print copy of any of these publications or to speak with a specialist, call 1-800-346-9140 (English), 7 a.m. to 7 p.m. Central Time or 1-800-411-3222 (Español), 8 a.m. to 5 p.m. Pacific Time, Monday through Friday.

Cattle production (beef and dairy)

Beef Farm Sustainability Checksheet – IP 129

- Full version (16 pages)

- Short version (4 pages)

This checksheet is designed to stimulate critical thinking in planning a beef cattle production farm. The series of questions is intended to create awareness about how decisions made in one area affect the results in other areas of your farm.

Cattle Production: Considerations for Pasture-Based Beef and Dairy Producers – IP305

Pasture- or grass-based livestock production is inherently sustainable and can lower production costs, reduce animal stress and boost animal immune systems. This publication highlights these and other practices producers are using to provide customers with nutritious food from sustainable farms and ranches.

Dairy Farm Sustainability Checksheet – IP174

This checksheet is designed to stimulate critical thinking in planning a milk production farm. This relates to all dairy species: cattle, goats and sheep. The series of questions is intended to create awareness about how decisions made in one area affect the results in other areas of your farm.

Dairy Beef – CT109

Dairy beef is an opportunity to diversify operations and boost income and represents an enterprise option for direct marketing to a niche market. This publication discusses dairy beef production, finishing, niche markets and direct marketing and analyzing profitability.

Dairy Production on Pasture: An Introduction to Grass-Based and Seasonal Dairying – IP340

In an era of high feed costs and uncertain milk prices, many dairy producers are looking to pasture to provide most of the dry matter for lactating



Jerseys grazing highly productive cool-season perennial pasture in Vermont. Photo courtesy USDA NRCS.

dairy cows during the growing season. This publication addresses aspects of pasture production, including animal selection and forage resource assessment, grazing, facilities, reproduction and health, organic production and seasonal economics.

The Economics of Grass-Based Dairying – IP210

The grass-based dairy allows the animals to harvest their feed, which can significantly reduce the activities and expenses of cutting, storing and feeding harvested forages. This publication discusses dairy economics, land requirements, supplemental feed, seasonal dairies, labor and profitability.

Dairy Resource List: Organic and Pasture-Based – IP307

This resource list offers many sources of information for organic and pasture-based dairy farmers. Topics include general organic dairying, pasture productivity, animal management, milk marketing and farm energy.

Raising Dairy Heifers on Pasture – CT110

This publication offers a number of references on pasture and grazing, discusses custom heifer-raising and costs of raising heifers and provides additional articles on the subject.

Value-Added Dairy Options – CT151

Dairy farmers can add value to their milk by processing and marketing their own products, such as cheeses, yogurt, butter, ice cream and farm-bottled milk. This publication discusses regulations and organic milk certification and offers resources for further information.

Beef Marketing Alternatives – IP290

This publication explores marketing alternatives for small-scale cattle

ranchers who would like to add value to the beef they produce. It includes methods to add value within the conventional marketing system, alternative marketing strategies including niche markets for natural, lean and organic beef, and production considerations for pasture-finished beef.

Ruminant Nutrition for Graziers – IP318

This publication provides managers with tools and references to consider biological and climatological variables and make decisions that ensure the ecological and economic viability of a grass-based ruminant livestock operation.

Hog production

Hog Production Alternatives – IP019

This publication addresses the two different directions that hog production is currently moving: contracting with large-scale vertical integrators and sustainable production of a smaller number of hogs sold through alternative markets.

Pork: Marketing Alternatives – IP153

Sustainable hog producers are creating products that many consumers want to buy but can't find in their grocery stores. Direct marketing and niche markets are among the alternative marketing strategies discussed in this publication. Legal considerations, labels, trademarks, processing regulations and obstacles are also addressed.

Considerations in Organic Hog Production – IP185

Part of the Organic Matters series, this 43-page publication is designed to speed the flow of technical information to those engaged in organic production. This publication focuses

on areas of hog production that relate specifically to National Organic Program compliance.

Profitable Pork – IP191 (USDA Sustainable Agriculture Network publication, print only)

This publication showcases examples of alternative ways to raise pork profitably. In designing hog systems that work on their farms, producers have been able to save on fixed costs, find greater flexibility, identify unique marketing channels and enjoy a better quality of life.

Hooped Shelters for Hogs – IP149

Hooped shelters have evolved as an alternative hog-finishing and gestating sow housing option. This publication discusses some of the advantages and disadvantages of using hoop structures, and provides information on hoop barn design, deep bedding, waste management and minimal-stress handling, as well as some cost analyses.

Sheep and goat production

Sustainable Sheep Production – IP102

This publication introduces concerns and practices specifically related to sustainable sheep production. Topics covered include breed selection, controlled grazing, pasture lambing, alternative health management and innovative marketing of meat and wool products.

An Illustrated Guide to Sheep and Goat Production – IP330

Sheep and goats are versatile animals and can be valuable and enjoyable additions to many farms, providing meat, milk and fiber products, as well as brush control and pasture improvement services. This 20-page basic and illustrated introduction to sheep

and goat production discusses animal selection, feeding, breeding and young stock, equipment and handling and marketing.

Dairy Sheep – IP288

This publication explores the dairy sheep business and helps producers decide if it is a viable option for their farms. The publication also addresses industry regulation, production issues, animal health, stock selection and nutrition issues surrounding dairy sheep.

Goats: Sustainable Production Overview – IP248

Goat production can be a valuable part of a sustainable farm. Goats can be incorporated into existing grazing operations with sheep and cattle or used for control of weeds and brush to help utilize a pasture's diversity. This publication provides fundamental information relevant to all goats, including information about feeding, reproduction and health.

Dairy Goats: Sustainable Production – IP258

This publication discusses the five major considerations to be addressed in planning for dairy goat production: labor; sales and marketing; processing; regulations; and budgeting and economics. It includes production information specific to dairy goats, including choosing breeds and selecting stock.

Meat Goats: Sustainable Production – IP200

This publication offers information specific to meat goat production, and should be read after the companion publication *Goats: Sustainable Production Overview*. This document discusses topics including selection, breeds, marketing, feeding, profitability and more.

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It includes sample budgets, case studies and many further resources.

Managing Internal Parasites in Sheep and Goats – IP293

Internal parasite management is a primary concern for a majority of sheep and goat producers. These parasites have become more difficult to manage because of developed resistance to nearly all available dewormers. This publication discusses new techniques to manage parasites and to prolong the efficacy of dewormers.

Tools for Managing Internal Parasites in Small Ruminants: Copper Wire Particles – IP317

This publication, produced by the National Center for Appropriate Technology (NCAT) and ATTRA and the Southern Consortium for Small Ruminant Parasite Control, describes how copper oxide wire particles can be used to treat internal parasites in sheep and goats. The publication contains information on how to make boluses of copper wire oxide particles and reports the results of studies on the effectiveness of this treatment.

Tools for Managing Internal Parasites in Small Ruminants: Sericea Lespedeza – IP316

This publication, produced by the National Center for Appropriate Technology (NCAT) and ATTRA and the Southern Consortium for Small Ruminant Parasite Control, discusses tools that can be used to manage internal parasites of sheep and goats that are becoming resistant to conventional dewormers. One such tool is the forage sericea lespedeza. This publication discusses how the forage can be used and presents the results of research on how it reduces parasites in small ruminants.

Small Ruminant Sustainability Checksheet and Resources

Small Ruminant Checksheet Quick Start – IP259

Small Ruminant Resources – RL043

Resource Manual CD-ROM – IP254A

These checksheets are designed to stimulate critical thinking when evaluating a farm that produces sheep or goats. The questions in these checksheets are intended to create awareness rather than rate management practices.

Poultry production

Alternative Poultry Production Systems and Outdoor Access – IP300

This publication discusses the differences between alternative and conventional production systems, as well as various aspects of free-range systems, common poultry housing approaches and integrating poultry production with vegetable production or livestock grazing.

Arsenic in Poultry Litter: Organic Regulations – IP266

This publication discusses the potential for arsenic in poultry litter, which is often used by organic producers as a fertilizer and source of organic matter for soil.



Goat grazing sericea lespedeza. Photo by Jean-Marie Luginbuhl.

Growing Your Range Poultry Business: An Entrepreneur's Toolbox – IP211

This toolbox is written for anyone who desires to make a profit from range poultry production, whether by direct marketing pastured poultry, building a processing plant or working cooperatively with other producers. This toolbox was produced by the National Center for Appropriate Technology (NCAT) and the Kerr Center for Sustainable Agriculture as part of a Heifer International project to enhance the opportunities to expand range poultry businesses.

Label Rouge: Pasture-Based Poultry Production in France – IP202

Pasture-raised poultry is increasingly popular in the United States. American farmers and small companies can benefit from studying the French Label Rouge program. Started as a grassroots movement and now commanding 30 percent of the French poultry market, it has helped boost incomes for small farmers.

Parasite Management for Natural and Organic Poultry: Coccidiosis – IP245

This publication discusses the life cycle of coccidiosis, as well as transmission in free-range production; management in the brooder and on pasture; and natural treatments, drugs and vaccines.



Outdoor access or "extensive" production allows poultry to express natural behaviors, provides sunlight and fresh air, and a healthy environment for the birds. Photo by Linda Coffey, NCAT.

Avian Influenza in Free-Range and Organic Poultry Production (online only)

Free-range and organic poultry producers raise a specialty product. Birds are provided with outdoor access and natural or organic feed. Routine antibiotics are avoided. This publication provides information on avian influenza as it pertains to this type of specialty poultry production.

Organic Poultry Production in the United States – IP331

In organic poultry production systems, birds are raised without cages in housing that allows outdoor access, are fed organic feed and managed with proactive practices and natural treatments. This publication discusses organic husbandry including living conditions, health, genetics and origin, feed and processing as specified under the livestock requirements of the U.S. Department of Agriculture National Organic Program.

Pastured Poultry: An HI Case Study Booklet – IP161

This booklet summarizes the experiences of 35 Southern farm families who from 1996 to 1999 participated in a project titled Integrating Pastured Poultry into the Farming Systems of Limited Resource Farmers. The project was conducted by the National Center for Appropriate Technology (NCAT) and Heifer International.

Pastured Poultry Nutrition – IP227 (print only)

A Heifer International publication.

Poultry House Management for Alternative Production – IP308

This publication addresses the indoor environment for poultry in alternative production. Poultry need access to an appropriate indoor environment for

good production and welfare. Attention to ventilation, temperature, lighting and litter conditions is needed.

Poultry: Equipment for Alternative Production – IP295

This publication describes some of the basic equipment needed for small-scale chicken flocks, especially flocks on range. Topics include watering and feeding equipment, fencing considerations and roosting and nesting boxes.

Poultry Genetics for Pastured Production – IP256

While most pastured poultry producers in North America raise the same fast-growing Cornish and White-Rock cross broilers used in conventional confined production, many producers are interested in alternative genetic types that may be more suitable for outdoor production or for niche markets. This publication provides information on the Cornish Rock crosses, discusses several slower-growing breeds and provides information on hatcheries that offer these alternative breeds.

Range Poultry Housing – CT125

In this publication, experienced pastured-poultry producer Robert Plamondon discusses housing designs for outdoor production, including daily move pens, machine-portable housing, fixed housing and feed shelters. Numerous examples of different types of poultry housing are pictured and described.

Small Poultry Processing Plants and Services Database (online only)

There are few processing facilities that provide poultry processing services for independent producers. Very large poultry processing plants are usually only set up to process their own birds. This database lists small meat processing plants that have

added poultry processing to their services, as well as other poultry processing plants.

Small-Scale Poultry Processing – IP231

This publication addresses small-scale processing, both on-farm and in small plants, and covers each step of processing poultry. It also offers examples of mobile processing units.

Organic livestock production

NCAT's Organic Livestock Workbook – IP228

This workbook is for organic and transitional producers with livestock or mixed crop and livestock operations. It is especially useful for growers contemplating conversion to, and those in the early years of transition to, organic production. Particular emphasis is placed on farming strategies and practices that promote sustainability.

Organic Livestock Documentation Forms – IP237

Tools that livestock producers can use for documenting practices, inputs and activities that demonstrate compliance with regulations, or that assist in farm recordkeeping.

Organic Standards for Livestock Production: Highlights of the USDA's National Organic Program Regulations – IP334

This collection of excerpts from the U.S. Department of Agriculture's National Organic Program (NOP) provides the reader with key standards relevant to organic livestock producers. This publication should be used with excerpts for all certified organic operations and organic crop production and handling of organic agricultural products, as applicable.

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Organic Livestock Feed Suppliers (online only)

This searchable online database provides information on suppliers that offer certified organic feed for livestock. It is searchable by region and by type of livestock feed offered. Lists of distributors for some organic feeds are also included.

Animal health and nutrition

Ruminant Nutrition for Graziers – IP318

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Managing Internal Parasites in Sheep and Goats – IP293

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Pastured Poultry Nutrition – IP227 (online only)

A Heifer International publication.

Integrated Parasite Management for Livestock – IP150

With parasites developing resistance to all dewormers and more farmers producing livestock by natural methods, there is interest in alternative ways to managing parasite problems such as nutrition and pasture management,

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beneficial soil organisms and strategic deworming.

Pasture, forage, grazing and range management

A Brief Overview of Nutrient Cycling in Pastures – IP221

Nutrients in a pasture system cycle through soil organisms, pasture plants and grazing livestock. Appropriate management can enhance the nutrient cycle, increase productivity and reduce costs.

Nutrient Cycling in Pastures – IP136

Nutrient cycles important in pasture systems are the water, carbon, nitrogen and phosphorus cycles. This in-depth publication has basic descriptions of these nutrient cycles and provides guidelines for managing pastures to enhance nutrient cycling efficiency for productive forage and livestock growth, soil health and water quality.

Assessing the Pasture Soil Resource – IP128

This technical note provides methods to determine the biological activity of pasture soils and practical tips on improving the usefulness of typical soil and plant samples.

Dung Beetle Benefits in the Pasture Ecosystem – CT155

This publication describes dung beetles and their benefits to pastures and offers management information. It also offers information about building a dung beetle farm.

Grazing Networks for Livestock Producers – CT166

Grazing networks are groups of farmers and ranchers who work together to increase their knowledge of forage management, pasture-based production and farm economics. This publication covers

how to begin or become a part of a grazing network and offers advice on sustaining the network. It includes a case study.

Grazing Contracts for Livestock – IP247

Grazing livestock for other farmers is a way to make a land investment return additional dollars to the land owner. This publication discusses some of the issues involved with contract grazing, including various classes of livestock, equipment, sample contracts and economic aspects.

Managed Grazing in Riparian Areas – IP223

This publication is designed to help farmers and ranchers identify and use appropriate grazing practices to protect riparian resources. Methods for protecting these fragile areas include keeping livestock from streambanks, properly resting pastures to restore degraded land and determining the proper duration and season for grazing pastures.

Multispecies Grazing – CT147

This paper discusses the benefits of multispecies grazing, potential problems and obstacles to adoption.

Rotational Grazing – IP086

Rotational grazing is periodically moving livestock to fresh paddocks to allow pastures to regrow. This publication addresses various aspects of rotational grazing, including the transition from a conventional system, fencing and watering systems, forage growth and effects on the animals.

Pasture, Rangeland and Grazing Management – IP306

This publication profiles the general types of pastures and rangelands and offers information about management and expected yields, weed management

strategies, land rehabilitation, paddock development, plant selection and drought and plant toxicosis.

Pastures: Sustainable Management – IP284

This publication addresses numerous aspects of sustainable pasture integration, grazing rotation strategies and management options. It covers grazing systems, pasture fertility, changes in the plant community through grazing, weed control and pasture maintenance. It also discusses planning and goal setting and offers an appendix on trees in pasture settings.

Pastures: Going Organic – IP297

This publication is an introduction to the regulations related to organic pasture and rangeland in the United States. Organically certified land is described under the National Organic Program (NOP), including activities and materials that are allowed or prohibited. Organic integrity is discussed, including records required to demonstrate compliance with the National Organic Standards.

Converting Cropland to Perennial Grassland – IP244

Converting cropland to perennial pasture is often a profitable move,

especially if the cropland is marginal. This publication examines some economic considerations of converting cropland to grassland, methods of establishing pasture on croplands and how to manage established pastures.

Organic Alternatives to Treated Lumber – CT170

This publication reminds all prospective and current certified organic producers that treated lumber is not allowed under the Final Rule of the National Organic Program (NOP) and provides information on alternative products.

Paddock Design, Fencing and Water Systems for Controlled Grazing – IP152/50

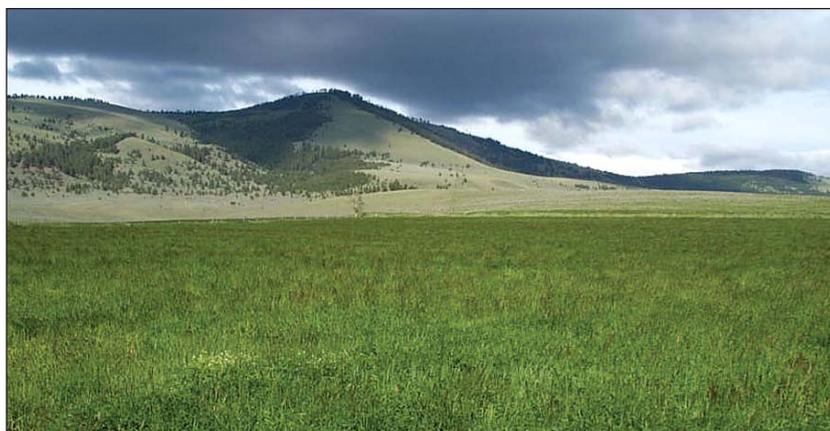
Interest in controlled grazing is increasing throughout the United States. Controlled grazing systems are economically feasible and more easily managed because of developments in fencing and water technology. This publication covers some of the basics of paddock design and current fencing and water technology.

Solar-Powered Livestock Watering Systems – IP217

This publication gives an introduction to solar-powered livestock watering systems, including discussions of cost, components and terminology, as well as some suggestions for designing and installing these systems. The strengths and weaknesses of solar pumping are compared to the main options for pumping in remote locations.

Freeze Protection for Solar-powered Livestock Watering Systems – IP215

Winter use of a solar pumping system is problematic but possible. Freezing temperatures pose two main challenges: winterizing a summer-use-only



The single most important factor to increase production on irrigated fields is a workable grazing management system that meets the nutritional needs of livestock and maintains the pasture sward in the vegetative stage throughout the grazing season. Photo by Lee Rinehart.

system and freeze-proofing a system intended for winter use. This publication offers several suggestions for keeping water open in winter.

Aquaculture and aquaponics

Aquaculture Enterprises: Considerations and Strategies – CT142

Aquaculture—the cultivation of fish and aquatic animals and plants—is expanding to meet consumer demand. This publication surveys the important considerations for planning an aquaculture enterprise. It will help you identify the production system species, and marketing strategy most appropriate for your situation.

Aquaponics—Integration of Hydroponics with Aquaculture – IP163

Aquaponics is a bio-integrated system that links recirculating aquaculture with hydroponic vegetable, flower or herb production. This publication provides an introduction to aquaponics with brief profiles of working units around the country.

Wildlife and unconventional livestock farming

Bison Production – IP151

This publication looks at bison production and marketing. It covers starting a bison enterprise, as well as issues of nutrition, handling, processing and direct marketing.

Llama and Alpaca Farming – CT136

This paper discusses considerations for raising llamas and alpacas, including regulations, marketing, nutrition, reproduction, handling, shelter and health concerns.

Ratite Production: Ostrich, Emu & Rhea – CT087

This publication discusses the history of ratite production as an alternative

livestock enterprise and covers many of the issues a beginning producer needs to consider before starting to raise ratites.

Other livestock topics

Baitworm Production – CT101

Earthworm husbandry, as with any livestock, requires management to ensure adequate reproduction, growth and health. This paper discusses some of the basics of raising and marketing commercially cultured bait earthworm species.

Beekeeping/Apiculture – IP229

This publication discusses various aspects of beekeeping or apiculture, including state inspection programs, beginning basics, income sources and budgets, insurance, Africanized bees, organic certification and various bee pests and diseases. Information on educational and training opportunities and further resources are also discussed.

Draft Animal Power for Farming – IP335

Farmers may want to consider using draft horses, mules or oxen as an alternative to tractors for farm work and as means of reducing fuel costs. This publication briefly discusses some of the considerations and potential benefits involved in the use of animal power and offers resources for further information and equipment.

Predator Control for Sustainable and Organic Livestock Production – IP196

This publication examines how to identify and control livestock predators. The focus is primarily on the control of coyotes and dogs through management practices such as fencing and secure areas and the use of guard animals such as dogs, donkeys and llamas.

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Worms for Composting (Vermicomposting) – IP110

Worms can convert organic and agriculture wastes into safe soil amendments or ingredients for potting soil mixes. These castings are stable, yet biologically active, and available to plants. Systems can be designed to produce either the castings or the worms themselves as the commercial product.

Español

Guía Ilustrada para la Producción de Ovinos y Caprinos – SP330

Esta básica y gráfica introducción a la producción de ovinos y caprinos discute la selección de animales, alimentación y pastura, equipo y manejo, y mercadeo.

Equipo para Producción Aviar Alternativa – SP295

Esta publicación describe parte del equipamiento básico necesario para parvadas de pollos en pequeña escala, especialmente en sistema extensivo.

Sistemas Avícolas Alternativos con Acceso a Pastura – SP300

La producción avícola alternativa esta creciendo debido a la demanda del consumidor para productos de especialidad de aves sin jaula y la producción de aves libres en pastura.

El Manejo de Gallineros para la Producción Alternativa – SP308

Mientras que el acceso al exterior es una parte importante del sistema libre en pastura y muchos otros sistemas de producción alternativa de avicultura, el medio ambiente interior y su manejo es crítico. Las aves necesitan acceso a un medio ambiente apropiado en el interior para buena producción y bienestar.

Nutrición para Rumiantes en Pastoreo – SP318

Esta publicación provee a los administradores de herramientas y referencias para considerar variables biológicas y climatológicas y tomar decisiones que aseguren la viabilidad ecológica y económica de una operación de ganado rumiante en pastoreo.

Nutrición para Aves de Pastura – SP227

Discuta los requerimientos para alimentar a las aves de pastura y los usos y valores nutritivos de diferentes ingredientes. También ilustra métodos para calcular la ración para formular los alimentos.

Procesamiento de Aves en Pequeña Escala – SP231

Cubre el procesamiento tanto en la granja como en plantas pequeñas. El acceso al procesamiento es un evento crítico para los pequeños productores.

Hmong

Lb phau duab qhia txog kev tu yaj thiab tshis – IP345

An Illustrated Guide to Sheep and Goat Production

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Amy Smith, Production

This publication is available on the Web at:
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